

AD-A037 940 ARMY ELECTRONICS COMMAND WHITE SANDS MISSILE RANGE N--ETC F/G 4/2
12815C LANCE MISSILE NUMBER 2473, ROUND NUMBER 289 RST (7 OCTOB--ETC(U)
OCT 76

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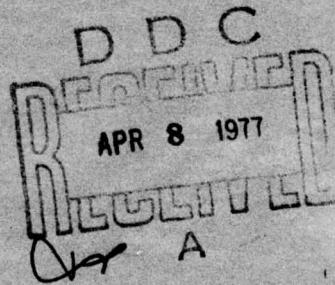
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METEOROLOGICAL DATA REPORT

12815C LANCE
MISSILE NO. 2473, ROUND NO. 289 RST
(7 October 1976)

BY

WSMR METEOROLOGICAL TEAM



ATMOSPHERIC SCIENCES LABORATORY
WHITE SANDS MISSILE RANGE, NEW MEXICO

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P Meteorological data gathered for the launching of 12815C Lance, Missile Number 2473, Round Number 289 RST, are presented in tabular form. <i>A</i>		

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INTRODUCTION

12815C Lance, Missile Number 2473, Round Number 289 RST, was launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 0816 HRS MDT, 7 October 1976. The scheduled launch time was 0815 HRS MDT.

DISCUSSION

Meteorological data were recorded and reduced by the WSMR Meteorological Team, Atmospheric Sciences Laboratory (ASL), WSMR, New Mexico. The data are presented in the following tabulations.

ELEVATION	3,990.0	FEET/MSL
PRESSURE	885.4	MBS
TEMPERATURE	9.8	°C
RELATIVE HUMIDITY	49	%
DEW POINT	-0.4	°C
DENSITY	1,086.6	GM/M ³
WIND SPEED	012	MPH
WIND DIRECTION	200	DEGREES
CLOUD COVER	2 4	Sc Ci

TABLE I. SURFACE OBSERVATIONS TAKEN AT WSD,
0817 HRS MDT/7 OCTOBER 1976.

ELEVATION	3,986.67	FEET/MSL
PRESSURE	885.3	MBS
TEMPERATURE	11.0	°C
RELATIVE HUMIDITY	44	%
DEW POINT	-0.7	°C
DENSITY	1,080.0	GM/M ³
WIND SPEED	030	MPH
WIND DIRECTION	018	DEGREES
CLOUD COVER	.4 .2	Sc Ci

TABLE II. SURFACE OBSERVATIONS TAKEN AT LC-33,
0820 HRS MDT/7 OCTOBER 1976.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)	HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
SUR	030	18.0	2100	345	12.0
100	025	18.0	2200	335	16.0
200	025	18.0	2300	325	17.0
300	020	17.0	2400	325	18.0
400	015	17.0	2500	335	17.0
500	020	15.0	2600	335	15.0
600	010	17.0	2700	340	18.0
700	005	18.0	2800	345	17.0
800	360	18.0	2900	350	19.0
900	005	17.0	3000	350	22.0
1000	360	18.0	3100	355	19.0
1100	345	19.0	3200	055	20.0
1200	345	19.0	3300	010	21.0
1300	350	15.0	3400	015	
1400	350	15.0	3500	015	
1500	340	14.0	3600	015	
1600	345	19.0	3700	020	21.0
1700	340	17.0	3800	360	16.0
1800	325	13.0	3900	355	16.0
1900	320	13.0	4000	355	15.0
2000	335	13.0	4100	350	14.0

TABLE III. PILOT-BALLOON-MEASURED WIND DATA, RELEASE NO. 1
RELEASED FROM LC-33, AT 0810 MDT/7 OCTOBER 1976
12815C LANCE, MISSILE NO. 2473, ROUND NO. 289 RST

PIBAL RELEASE POINT WSTM COORDINATES:

X = 486,296.83 Y = 185,251.85 Z = 3,986.67

APPROXIMATELY: 815 FEET SOUTH SOUTHEAST OF LAUNCHER.

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
4200	350	13.0
4300	355	12.0
4400	350	12.0
4500	350	13.0
4600	335	10.0
4700	330	12.0
4800	345	10.0
4900	340	8.0
5000	335	9.0
5100	330	12.0
5200	345	7.0
5300	350	7.0
5400	010	12.0
5500	355	12.0
5600	340	12.0

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
5700	345	11.0
5800	360	10.0
5900	355	12.0
6000	360	14.0
6100	350	16.0
6200	350	16.0
6300	355	18.0
6400	355	18.0
6500	350	16.0
6600	335	18.0
6700	335	18.0
6800	340	16.0
6900	345	18.0
7000	340	22.0
7100	340	22.0

TABLE III. (CONT)

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)	HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
SUR	340	10.0	2100	329	10.0
100	339	11.0	2200	320	11.0
200	339	10.0	2300	328	10.0
300	339	10.0	2400	340	12.0
400	339	10.0	2500	347	12.0
500	338	9.0	2600	344	11.0
600	334	9.0	2700	332	12.0
700	334	9.0	2800	332	12.0
800	331	8.0	2900	344	11.0
900	330	8.0	3000	346	11.0
1000	328	7.0	3100	339	10.0
1100	329	7.0	3200	324	8.0
1200	331	7.0	3300	330	10.0
1300	325	8.0	3400	334	12.0
1400	332	7.0	3500	338	13.0
1500	315	5.0	3600	354	12.0
1600	323	4.0	3700	360	10.0
1700	322	5.0	3800	020	8.0
1800	328	8.0	3900	032	5.0
1900	329	10.0	4000	042	7.0
2000	339	9.0	4100	049	8.0

TABLE IV. PILOT-BALLOON-MEASURED WIND DATA, RELEASE NO. 2
RELEASED FROM LC-33, AT 0820 MDT/7 OCTOBER 1976
12815C LANCE, MISSILE NO. 2473, ROUND NO. 289 RST

PIBAL RELEASE POINT WSTM COORDINATES:

X = 486,296.83 Y = 185,251.85 Z = 3,986.67

APPROXIMATELY: 815 FEET SOUTH SOUTHEAST OF LAUNCHER.

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
4200	042	10.0
4300	031	9.0
4400	032	10.0
4500	025	11.0
4600	024	9.0
4700	027	8.0
4800	018	9.0
4900	028	8.0
5000	021	8.0
5100	013	8.0
5200	014	8.0
5300	009	8.0
5400	012	9.0
5500	008	
5600	016	
5700	011	
5800	025	
5900	008	9.0
6000	005	11.0
6100	360	10.0
6200	347	11.0
6300	346	12.0
6400	345	14.0
6500	347	13.0

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
6600	352	15.0
6700	354	16.0
6800	356	17.0
6900	351	17.0
7000	346	18.0
7100	343	19.0
7200	342	18.0
7300	338	18.0
7400	332	20.0
7500	334	20.0
7600	334	23.0
7700	332	24.0
7800	334	26.0
7900	334	27.0
8000	338	28.0
8100	338	28.0
8200	338	28.0
8300	334	28.0
8400	331	29.0
8500	332	30.0
8600	331	31.0
8700	330	31.0
8800	324	31.0
8900	324	28.0

TABLE IV. (CONT)

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
9000	323	29.0
9100	325	32.0
9200	323	29.0
9300	324	31.0
9400	324	32.0
9500	323	31.0
9600	324	32.0
9700	324	33.0
9800	324	33.0
9900	321	35.0
10000	321	37.0
10100	324	38.0
10200	323	41.0
10300	321	44.0
10400	324	44.0
10500	322	45.0

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
10600	318	46.0
10700	315	47.0
10800	313	49.0
10900	309	50.0
11000	315	52.0
11100	310	51.0
11200	312	52.0
11300	311	52.0
11400	312	52.0
11500	312	54.0
11600	310	55.0
11700	313	58.0
11800	307	55.0
11900	305	57.0
12000	304	57.0

TABLE IV. (CONT)

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

STATION ALTITUDE 3939.00 FEET MSL
7 OCT. 1962 0805 HRS MDT
SECTION 45 • 87.

BRIGHTON LEVEL DATA
2810.426678
MILE 2.075

TABLE V

MEASUREMENT	GEOMETRIC ALTITUDE MILLIMETERS MSL FEET	INTERPOLATION		RELATION PERCENT
		AIR LEVEL POINT DISTANCE CENTIMETER	AIR LEVEL POINT DISTANCE CENTIMETER	
865.3	3939.0	9.8	-1.6	45.0
858.0	5075.5	3.1	-7.7	53.0
729.8	9173.1	.2	-6.6	74.0
710.8	9467.5	-0.9	-1.6	95.0
703.0	10269.3	-1.3	-4.0	82.0
685.6	11129.0	-1.4	-7.5	54.0
671.2	11370.4	-1.1	-1.4	47.0
667.0	11936.7	-4.5	-26.8	16.0
623.6	14348.2	-2.6	-25.6	15.0
535.6	17444.7	-10.4	-36.1	18.0
509.6	18944.6	-1.6	-32.3	16.0
458.6	20596.6	-16.1	-36.3	16.0
431.6	22630.6	-17.5	-37.2	16.0
400.0	24455.3	-2.4	-46.4	16.0
325.0	29382.5	-32.4	-49.6	16.0
300.0	31222.5	-37.6		
256.0	35271.7	-46.6		
200.0	39497.1	-56.6		
191.8	40353.4	-56.8		
183.6	41770.9	-57.1		
178.6	42346.9	-56.9		
150.0	45916.6	-65.3		
138.0	47513.5	-67.4		
128.2	49350.2	-68.5		
122.4	52172.3	-69.5		
100.0	53976.1	-65.3		
96.6	54661.0	-60.4		
77.0	59322.3	-62.3		
73.0	61243.6	-60.3		
56.0	66320.8	-56.4		

SITE LOCATION 39°49.42' FELT MSL
EASTING 70
NORTHING 400.0
ELEVATION 100.0

STATION ELEVATION 100.0 FT

SITE COORDINATES
48°56.00' N
162°45.00' E

TABLE V (CONT)

PRESSURE	GEOMETRIC ALTITUDE	TEMPERATURE AT EARTH POINT	RELATIVE PERCENT
1013.2	74392.3	-56.2	

STATION ALTITUDE 3900.0 FEET MSL
7 OCT. 1955 0805 HRS MDT
ASCENSION IS. 073

OPACITY DATA
261004078
WHITE SHEETS

45TH SITE COORDINATES
468280.00 FEET E
45245.00 FEET N

TABLE VI

GEOMETRIC ALTITUDE	PRESSURE ALTITUDE	TEMPERATURE AT GROUND	RELATIVE AIR DEPOINT	SPECIFIC CONDUCT	WIND DIRECTION	WIND SPEED	INDEX OF REFRACTION
FEET	FEET	DEGREES CENTIGR	PERCENT	MM/SEC	DEGREES (EAST)	KNOTS	
3749.0	3458.3	7.8	-1.0	45.0	1087.4	65e.1	1.000268
7000.0	6614.0	9.0	-1.5	45.1	1087.1	65e.1	0.999268
10000.0	9568.1	9.0	-1.2	45.7	1070.0	65b.2	1.000265
13000.0	12500.0	9.0	-0.2	52.3	1053.0	654.3	1.000262
16000.0	15530.0	7.3	-0.6	57.1	1037.0	653.3	1.000259
19000.0	18570.4	7.3	-0.4	62.1	1021.4	652.4	1.000256
22000.0	21620.5	5.5	-0.4	67.1	1005.9	651.1	1.000253
25000.0	24660.5	4.4	-0.2	72.1	991.6	650.0	1.000250
28000.0	27700.4	3.4	-0.2	77.2	975.6	646.9	1.000247
31000.0	30740.5	2.5	-0.2	82.2	960.9	647.7	1.000244
34000.0	33780.4	1.5	-0.4	87.2	946.4	646.6	1.000241
37000.0	36820.5	0.5	-0.6	92.3	932.1	645.5	1.000237
40000.0	40720.6	-0.3	-1.1	94.5	917.6	644.4	1.000233
43000.0	43670.5	-1.0	-2.4	90.7	902.9	643.5	1.000227
46000.0	46620.5	-1.3	-5.4	73.5	867.3	643.0	1.000219
49000.0	50530.0	-1.4	-9.2	55.1	871.0	642.8	1.000210
52000.0	54467.9	-1.3	-11.1	47.4	854.5	642.8	1.000204
55000.0	58555.4	-2.0	-13.5	41.1	846.7	641.4	1.000198
58000.0	62642.7	-2.7	-16.1	34.6	827.1	641.0	1.000193
61000.0	66730.5	-3.5	-19.1	28.4	813.7	640.0	1.000188
64000.0	6918.5	-4.2	-22.6	22.1	800.6	639.1	1.000184
67000.0	6666.7	-4.8	-26.7	16.0	797.3	638.3	1.000179
70000.0	5955.1	-3.0	-25.0	15.1	767.0	640.5	1.000175
73000.0	5633.6	-4.2	-26.5	15.6	755.7	639.0	1.000172
76000.0	5272.3	-5.5	-27.2	16.1	744.6	637.5	1.000169
79000.0	5064.3	-6.8	-27.9	16.6	733.7	636.0	1.000167
82000.0	4650.5	-6.0	-26.0	17.1	723.0	634.5	1.000164
85000.0	4259.9	-9.3	-29.4	17.6	712.5	633.0	1.000162
88000.0	3879.4	-15.4	-31.2	17.9	701.8	631.5	1.000159
91000.0	3498.4	-11.6	-31.9	17.5	689.1	631.1	1.000156

STATION ALTITUDE 599.0 FEET MSL
7 OCT. 76 0805 HRS MDT
ASCENS. 140. 670

OPR. NO. 14
REF ID: 676
WHITE SPRINGS

WSTM SITE COORDINATES
4985.600.00 FEET E
165.45.00 FEET N

TABLE VI (CONT)

ASCENS.	ALTITUDE FEET	PRESSURE MILLIBARS	TEMPERATURE DEGREES CENTIGRADE	RELATIVE HUMIDITY PERCENT	RELATIVE HUMIDITY PERCENT	RELATIVE HUMIDITY PERCENT	DENSITY GR./CUBE METER	SPEED OF WIND KNOTS	DIRECTION DEGREES (1h)	WIND DATA KNOTS	INDEX OF REFRACTION
16500.0	508.9	-11.2	-51.6	16.6	67.6	630.6	315.8	48.8	1000153		
17000.0	448.8	-11.6	-52.5	16.6	664.7	630.0	322.7	49.5	1000150		
17500.0	489.5	-13.1	-53.5	16.6	654.9	628.3	328.8	51.0	1000148		
20000.0	479.3	-14.5	-54.7	16.6	645.5	626.7	333.6	55.4	1000146		
20500.0	469.8	-15.6	-55.6	16.6	636.9	625.0	336.9	60.2	1000143		
21000.0	460.4	-16.4	-56.2	16.6	624.5	624.3	337.6	66.5	1000141		
21500.0	451.2	-16.7	-56.5	16.6	612.8	625.9	335.7	72.3	1000138		
22000.0	442.1	-17.1	-56.8	16.6	601.3	623.5	332.1	77.8	1000135		
22500.0	433.3	-17.4	-57.1	16.6	590.1	623.1	328.4	78.1	1000133		
23000.0	424.5	-16.3	-57.8	16.6	580.2	622.0	325.1	77.2	1000131		
23500.0	415.9	-15.4	-58.7	16.6	570.6	620.7	324.4	73.5	1000128		
24000.0	407.5	-20.4	-59.6	16.6	561.6	619.4	324.2	71.7	1000126		
24500.0	399.2	-21.5	-54.5	16.6	552.6	616.1	324.6	71.8	1000124		
25000.0	390.9	-22.6	-41.4	16.6	543.5	610.7	324.5	73.4	1000122		
25500.0	382.6	-23.7	-42.4	16.6	534.5	615.3	324.1	75.6	1000120		
26000.0	374.8	-24.6	-43.3	16.6	525.8	613.9	323.7	77.2	1000118		
26500.0	367.0	-26.0	-44.2	16.6	517.1	612.5	323.2	78.6	1000116		
27000.0	359.3	-27.1	-45.1	16.6	508.6	611.1	322.6	79.7	1000114		
27500.0	351.6	-26.2	-46.1	16.6	500.3	609.8	322.5	80.7	1000112		
28000.0	344.5	-29.3	-47.0	16.6	492.1	608.4	322.2	81.9	1000110		
28500.0	337.3	-30.4	-47.9	16.6	484.1	607.0	322.1	83.2	1000108		
29000.0	330.3	-31.5	-46.9	16.6	476.2	605.6	322.1	84.4	1000107		
29500.0	323.3	-32.7	-45.4	15.6	468.4	604.1	322.2	85.4	1000105		
30000.0	316.4	-33.9	-46.3	15.6	460.7	602.5	322.2	85.9	1000103		
30500.0	309.6	-35.2	-45.9	15.6	453.2	601.6	322.6	85.6	1000101		
31000.0	302.9	-36.4	-46.9	15.6	445.8	594.4	321.7	84.8	1000099		
31500.0	296.5	-37.6	-47.8	15.6	438.5	591.7	320.4	83.0	1000098		
32000.0	289.7	-39.2	-48.7	15.6	431.4	595.0	320.6	81.7	1000096		
32500.0	283.2	-40.7	-49.6	15.6	424.4	594.0	319.1	81.6	1000095		
33000.0	276.5	-42.1	-50.5	15.6	417.5	592.2	318.4	82.4	1000093		

• AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3809.0 FEET MSL
7 OCT. /6 0805 HRS MDT
ASCENSIO. NO. 675

REFRACTION
2812.678
LITE SITES
165.45.00 FEET N

TABLE VI (CONT)

GEOMETRIC ALTITUDE IN FEET	PRESSURE IN MILLIBARS	TEMPERATURE AIR DEPART. CENTIGRADE	REL.HUM. PERCENT	WIND DATA SPEED KNOTS	DIRECTION DEGREES(18)	INDEX OF REFRACTION
33500.0	270.8	-43.5	410.8	590.3	318.1	1.000091
34000.0	264.7	-45.0	424.1	586.5	318.0	1.000090
34500.0	256.6	-46.4	377.6	566.7	318.3	1.000089
35000.0	253.1	-47.4	391.3	564.8	316.8	1.000087
35500.0	247.9	-49.1	384.5	563.2	319.9	1.000086
36000.0	241.5	-50.1	377.3	581.6	321.6	1.000084
36500.0	235.9	-51.2	376.3	580.4	323.6	1.000082
37000.0	230.4	-52.3	363.4	579.0	325.8	1.000081
37500.0	225.0	-53.3	356.6	577.6	327.7	1.000079
38000.0	219.6	-54.4	356.0	576.2	329.1	1.000078
38500.0	214.7	-55.4	349.5	574.6	329.1	1.000077
39000.0	209.6	-56.5	337.1	573.4	329.0	1.000075
39500.0	204.8	-57.5	336.6	572.0	328.4	1.000074
40000.0	200.0	-58.6	324.7	570.6	327.9	1.000073
40500.0	195.2	-58.7	317.1	570.5	328.2	1.000072
41000.0	190.5	-58.5	309.3	570.7	328.6	1.000071
41500.0	186.0	-57.6	360.6	572.0	329.4	1.000070
42000.0	181.8	-57.0	292.7	572.7	322.9	1.000069
42500.0	177.3	-57.3	286.0	572.4	335.3	1.000068
43000.0	173.5	-58.4	286.7	570.9	337.6	1.000067
43500.0	168.8	-59.6	275.4	569.3	339.5	1.000066
44000.0	164.7	-60.8	270.2	567.7	336.9	1.000065
44500.0	160.6	-62.0	265.2	566.1	356.3	1.000064
45000.0	156.7	-63.1	266.2	564.6	336.2	1.000063
45500.0	153.1	-64.3	255.4	563.0	333.6	1.000062
46000.0	149.4	-65.4	250.5	561.5	330.7	1.000061
46500.0	145.7	-66.5	245.1	560.7	326.4	1.000060
47000.0	142.1	-66.7	234.7	554.8	322.6	1.000059
47500.0	138.6	-67.3	234.5	559.0	319.4	1.000058
48000.0	135.1	-67.1	226.5	554.2	317.2	1.000057

SATION ALTITUDE 3789 FEET MSL
7 OCT. 76 0805 HRS MDT
MISSION NO. 670

UPPER AIR DATA
ZONAL WIND
WIND SPEEDS
WEATHER

STATION SITE COORDINATES
46850.0 FEET E
13545.0 FEET N

TABLE VI (CONT)

STATION	PRESSURE ALTITUDE MSL FEET	TEMPERATURE AIR DEPOLAR. MILLIBARS	DEGREES CENTIGRADE	RELATIVE HUMIDITY PERCENT	GPM/CU M SCOUT KNOTS	DIRECTION ANGLE(S) LETTER	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
48500.0	101.0	-66.8		222.5	559.0	315.3	45.9	1.360350
47000.0	125.2	-66.5		216.7	560.0	315.0	47.1	1.060048
47500.0	145.3	-66.7		211.7	559.5	314.6	48.2	1.360347
50000.0	122.4	-67.4		206.9	558.3	314.8	49.0	1.360346
50500.0	119.2	-67.9		202.2	558.2	315.2	48.7	1.060045
51000.0	116.4	-68.4		197.6	557.5	315.6	48.4	1.060044
51500.0	113.3	-68.6		193.2	556.9	316.0	47.8	1.660343
52000.0	110.5	-69.3		168.8	556.2	318.6	47.0	1.660342
52500.0	107.7	-66.6		163.6	556.9	320.6	46.3	1.060041
53000.0	105.0	-67.6		176.0	558.5	323.1	44.5	1.060040
53500.0	102.4	-66.4		172.6	560.1	325.6	42.5	1.060038
54000.0	99.9	-65.1		167.3	561.9	328.4	40.6	1.060037
54500.0	97.5	-61.7		160.5	566.6	329.4	36.1	1.360036
55000.0	95.1	-60.5		155.8	568.1	330.4	31.4	1.360035
55500.0	92.8	-60.7		152.2	567.8	331.7	26.6	1.360034
56000.0	90.6	-60.9		148.7	567.5	328.9	22.2	1.360033
56500.0	88.4	-61.1		145.2	567.2	324.9	17.6	1.360032
57000.0	86.3	-61.3		141.9	567.0	316.6	14.1	1.360032
57500.0	84.2	-61.6		138.6	566.7	312.6	13.6	1.060031
58000.0	82.1	-61.6		135.4	566.4	306.2	13.1	1.060030
58500.0	80.2	-62.0		132.2	566.1	301.2	13.1	1.060029
59000.0	78.3	-62.2		129.2	565.9	302.5	13.6	1.360029
59500.0	76.4	-62.4		125.9	566.2	303.0	14.2	1.060028
60000.0	74.5	-61.4		122.3	567.5	305.1	14.5	1.060027
60500.0	72.7	-59.9		118.6	566.9	307.4	13.6	1.460026
61000.0	71.0	-58.9		115.4	576.3	309.9	12.7	1.060026
61500.0	69.3	-58.2		112.3	571.2	312.6	11.7	1.060025
62000.0	67.6	-56.0		109.5	571.4	314.1	10.3	1.060024
62500.0	66.1	-57.8		106.4	571.7	316.1	9.7	1.060024
63000.0	64.5	-57.6		104.2	572.0	318.1	7.8	1.060023

STATION ALTITUDE 2919 FEET MSL
7 OCT. 76 0805 HRS MDT
ASCENSIO N HGT. 676

LIFT LINE
2412620676
WHITE SMOKE

WSTM SITE COORDINATES
488560.00 FEET E
18545.00 FEET N

TABLE VI (CONT)

HEIGHT ALTITUDE MSL FEET	PRESSURE MM. OF MERCURY	TEMPERATURE KIN DEPOT CENTIGRADE	REL. DEPOT PER CENT	REL. CENTIGRADE	SPEED OF WIND KNOTS	DIRECTION WIND DEGREES (TN)	INDEX OF REFRACTION
6800.0	63.0	-57.4	1.1.1	572.2	347.5	7.9	1.000023
6900.0	61.5	-57.2	49.2	572.5	316.9	6.6	1.000022
7000.0	60.0	-57.0	96.7	572.6	315.2	8.2	1.000022
7100.0	58.0	-56.8	94.3	573.1	311.4	8.6	1.000021
7200.0	57.0	-56.6	92.0	573.3	308.0	8.9	1.000020
7300.0	55.9	-56.4	84.8	573.6	303.4	8.5	1.000020
7400.0	54.5	-56.2	67.6	573.9	295.5	7.4	1.000020
7500.0	53.0	-55.9	85.4	574.2	266.0	6.5	1.000019
7600.0	52.0	-55.7	63.3	574.4	278.9	5.8	1.000019
7700.0	50.6	-55.5	61.3	574.7	274.1	5.2	1.000018
7800.0	49.0	-55.4	79.3	574.8	268.1	4.7	1.000016
7900.0	48.0	-55.3	77.5	574.8	260.2	4.6	1.000017
8000.0	47.3	-55.6	75.7	574.7	297.4	5.2	1.000017
7200.0	46.2	-55.6	73.9	574.6	313.3	6.1	1.000016
7300.0	45.1	-55.7	72.2	574.5	320.3	7.3	1.000016
7400.0	44.0	-55.6	70.5	574.4	327.6	8.6	1.000016
7500.0	42.0	-55.6	68.9	574.3	322.9	10.0	1.000015
7200.0	42.0	-55.9	67.3	574.2			1.000015
73500.0	41.0	-56.0	65.6	574.1			1.000015
73500.0	40.0	-56.0	64.2	574.0			1.000014
73500.0	39.1	-56.1	62.7	573.9			1.000014
74000.0	38.2	-56.2	61.3	573.8			1.000014

STATION ALTITUDE 3769.6 FT ELT MSL
 7° 45' 7" 0805 HRS MDT
 SECTIONAL HU. 678

LIGHTHOUSE LEVELS
 2812.2-676
 WHITE SANDS
 SECTIONAL HU. 678

TABLE VII

PROBABLE DEPARTURE OF L. L. POINTS	FIRE	LIGHTHOUSE CENTRAL	AIR DEP. POINT	REL. HGT. CENTRAL	PERCENT	REL. HGT. CENTRAL	DIRECTION DEGREES (N)	SPEED KNOTS
656.0	5.094*	6.04	-6.9	53.8	4.3	13.08		
660.0	6.726*	5.87	-6.2	69.1	2.5	15.04		
750.0	8.457*	4.00	-6.4	87.1	1.47	9.06		
760.0	1.0205*	-1.03	-6.6	84.1	347.9	12.02		
850.0	1.2201*	-2.03	-1.45	38.8	325.0	22.02		
860.0	1.4276*	-3.04	-2.54	15.1	366.6	40.00		
350.0	1.0517*	-8.01	-28.7	17.1	296.6	49.04		
360.0	1.6925*	-1.06	-32.3	16.1	321.9	49.04		
450.0	2.1541*	-1.08	-36.6	16.1	335.2	73.00		
460.0	2.9423*	-2.04	-40.4	16.1	324.5	71.06		
350.0	2.7656*	-2.05	-46.3	16.1	322.4	81.00		
360.0	3.171*	-3.71	-		321.3	84.0		
450.0	3.5207*	-4.66	-		319.4	89.00		
260.0	3.9915*	-5.69	-		327.9	89.05		
475.0	4.2677*	-5.79	-		336.6	65.06		
450.0	4.5611*	-6.53	-		331.3	53.03		
125.0	4.9425*	-6.71	-		314.8	46.03		
160.0	5.3631*	-6.53	-		328.2	46.07		
60.0	5.6370*	-6.24	-		361.3	13.01		
70.0	6.1095*	-5.83	-		311.5	12.02		
60.0	6.4286*	-5.70	-		315.3	8.02		
50.0	6.6569*	-5.54	-		270.5	4.9		
40.0	7.2751*	-5.61	-					

* AT LAST G.L. ISSUED KILLATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4160.59 FEET ASL
7 OCT. 76 0815 HRS MDT
ASCENSION ISL.

SIGHTING LINE DATA
261111Z/4
MULLERIN,
ASCENSION ISL.

TABLE VIII

PRESSURE IN MILLIBARS	ALTITUDE IN FEET	WIND SPEED IN FEET PER SECOND	TEMPERATURE IN DEGREES CELSIUS	HUMIDITY PERCENT
5780.4	4126.0	10.1	-4.5	59.0
5650.0	3021.1	8.0	-3.3	56.0
7620.6	7924.6	1.6	-2.6	56.0
7000.0	10163.5	-2.4	-0.6	56.0
6800.0	10936.6	-3.9	-0.4	83.0
6420.2	12420.2	-5.0	-1.0	66.0
6030.4	14019.5	-8.6	-1.4	65.0
5870.6	14695.2	-8.6	-2.7	21.0
5620.9	14900.3	-7.2	-2.6	16.0
5500.6	16348.5	-8.1	-2.6	16.0
5000.0	18795.7	-13.0	-3.1	19.0
4000.0	24262.4	-22.0	-3.9	21.0
3570.2	26970.6	-30.5	-4.5	22.0
3380.4	28245.6	-31.7	-4.6	21.0
3130.4	30003.3	-35.6	-5.0	21.0
3000.0	31000.7	-37.0		
2940.4	31429.4	-37.4		
2500.0	35061.0	-48.1		
2140.0	36369.3	-57.0		
2000.0	39775.4	-58.3		
1970.0	40025.3	-58.7		
1950.0	40301.5	-55.4		
1900.6	40760.4	-54.1		
1620.2	44129.9	-62.4		
1500.0	45712.0	-64.7		
1350.4	47756.2	-68.1		
1130.4	51273.1	-67.3		
1060.2	52244.0	-66.4		
1000.0	53770.2	-66.2		
710.0	56666.9	-57.0		

STATION ALTITUDE 4146.59 FEET
7 OCT. 70 0815 HRS MDT
ASCENSION NO. 374

SIGNIFICANT LEVEL DATA
281001Z 74
MULLOAN

" 271001Z 74
2710024 FLLT E
366/450.24 FLLT N

TABLE VIII (CONT)

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE FEET	TEMPERATURE AIR DEGREES CENSIUS	RELATIVE HUMIDITY PERCENT
75.0	57426.2	-63.0	
72.0	60280.2	-59.0	
70.0	61089.5	-59.7	
64.0	64939.4	-59.4	
63.0	63200.6	-57.0	
50.0	60103.7	-56.0	
46.0	69753.7	-58.0	
38.0	73389.6	-57.0	
35.0	75331.4	-51.9	
30.0	76881.6	-51.3	
20.0	87647.3	-46.0	
13.0	96722.1	-47.0	
10.0	102679.6	-42.0	
7.0	105466.2	-40.4	

STATION ALTITUDE 4,000 FEET
/ OCT. 7, 0815 HRS MDT
ASCENSION 100. 37.

UPPER AIR DATA
2000-4
HOLCOMB,
TABLE IX

STATION CONSTRUCTION
2/14/44
SIGHTING FULL

GEOMETRIC PRESSURE
ALTITUDE MILLIARD MILLIARES CANTIGRAVE

TEMPERATURE AIR DE "PULV
DEGREES CELSIUS

GEOMETRIC ALTITUDE MILLIARD MILLIARES CANTIGRAVE	PRESSURE ALTITUDE MILLIARD MILLIARES CANTIGRAVE	TEMPERATURE AIR DE "PULV DEGREES CELSIUS	RELATIVE HUMIDITY PERCENT	WIND DIRECTION AND VELOCITY MEILS KILOMETERS/HOUR	WIND VELOCITIES (T ₀)	INFLUENCE OF REACTION
41200.6	8760.4	10.1	2.5	27.0	0.7	1.0000
45000.0	8660.4	7.2	1.5	58.6	0.7	1.0000
50000.0	8500.7	0.0	0.2	58.0	0.6	1.0000
52000.0	8350.0	7.0	-0.7	58.0	0.6	1.0000
54000.0	8140.5	5.9	-1.7	56.0	0.6	1.0000
56000.0	8040.4	4.8	-2.7	56.0	0.6	1.0000
58000.0	7890.5	3.8	-3.7	58.0	0.6	1.0000
60000.0	7740.9	2.7	-4.7	58.0	0.6	1.0000
62000.0	7600.6	1.7	-5.6	58.4	0.6	1.0000
64000.0	7460.2	0.8	-5.8	61.2	0.5	1.0000
66000.0	7320.2	-0.1	-6.0	64.2	0.4	1.0000
68000.0	7180.4	-0.9	-6.4	67.4	0.4	1.0000
70000.0	7040.9	-1.8	-6.3	69.9	0.4	1.0000
72000.0	6910.5	-2.9	-6.2	76.0	0.4	1.0000
74000.0	6780.4	-4.9	-6.5	82.4	0.4	1.0000
76000.0	6650.4	-4.0	-7.7	77.3	0.4	1.0000
78000.0	6520.7	-4.7	-8.9	72.3	0.4	1.0000
80000.0	6400.2	-5.2	-10.2	67.8	0.3	1.0000
82000.0	6270.9	-6.4	-11.0	66.2	0.3	1.0000
84000.0	6150.0	-7.6	-13.1	64.6	0.3	1.0000
86000.0	6030.9	-8.6	-14.5	63.1	0.3	1.0000
88000.0	5920.1	-8.6	-22.1	33.1	0.2	1.0000
90000.0	5800.6	-7.3	-26.0	16.1	0.2	1.0000
92000.0	5690.4	-7.6	-26.4	16.8	0.2	1.0000
94000.0	5580.4	-7.9	-26.3	17.5	0.2	1.0000
96000.0	5470.5	-6.4	-28.4	18.1	0.2	1.0000
98000.0	5360.6	-9.4	-29.1	18.3	0.2	1.0000
100000.0	5260.5	-10.4	-29.6	18.5	0.2	1.0000
102000.0	5160.0	-11.4	-30.2	18.7	0.2	1.0000
104000.0	5050.9	-12.4	-31.3	18.9	0.2	1.0000

STATION ALTITUDE - 1400.59 FEET ASL
7 JULY 70 0815 HRS MDT
ASCENSION ISL. 274

UPPER AIR DATA
26 AUGUST 74
NOVUMA.

TABLE IX (CONT)

GEOMETRIC PRESSURE ALTITUDE MILBARS MSL FEET	AIR TEMPERATURE AIR TEMPERATURE MILLIBARS CENTIGRAVE	RELATIVE HUMIDITY PERCENT	WIND SPEED GMI/CUBIC METERS	WIND DIRECTION KNOTS	WIND SPEED KNOTS	INDEX OF REFRACTION
19500.0	495.09	-12.4	19.0	004.0	040.0	1.000148
19600.0	485.09	-14.3	19.3	052.0	040.0	1.000148
19700.0	476.01	-15.2	19.3	042.0	040.0	1.000145
19800.0	466.05	-16.0	19.4	042.0	040.0	1.000145
19900.0	457.01	-16.9	19.5	031.9	024.0	1.000145
20000.0	447.09	-17.8	19.6	021.4	043.7	1.000140
20100.0	438.09	-18.7	20.0	011.0	044.0	1.000136
20200.0	430.09	-19.6	20.2	000.6	046.0	1.000136
20300.0	425.01	-19.6	20.4	590.0	020.4	1.000133
20400.0	421.04	-20.5	20.5	581.0	017.3	1.000131
20500.0	412.09	-21.4	20.7	571.0	016.4	1.000129
20600.0	404.06	-22.3	20.9	561.0	017.1	1.000126
20700.0	396.04	-23.4	21.1	552.0	012.7	1.000124
20800.0	388.01	-24.9	21.3	544.0	013.9	1.000124
20900.0	380.00	-26.3	21.5	536.0	014.1	1.000124
21000.0	372.01	-27.7	21.6	526.0	010.4	1.000120
21100.0	364.03	-29.2	21.6	520.0	008.0	1.000117
21200.0	356.08	-30.3	22.0	512.0	009.9	1.000116
21300.0	349.02	-31.0	21.6	502.0	008.3	1.000116
21400.0	341.08	-31.5	21.2	492.0	005.7	1.000116
21500.0	334.05	-32.3	21.0	483.0	004.0	1.000116
21600.0	327.03	-33.5	21.0	475.0	004.4	1.000115
21700.0	320.03	-34.0	21.0	467.0	004.7	1.000115
21800.0	313.04	-35.8	21.0	458.0	004.3	1.000115
21900.0	306.07	-36.4	10.5*	451.0	007.0	1.000115
22000.0	300.00	-37.0	0.0*	442.0	007.0	1.000114
22100.0	293.05	-37.6	0.0	434.0	007.0	1.000114
22200.0	286.09	-37.1	0.0	427.0	006.0	1.000114
22300.0	280.02	-40.6	0.0	420.0	006.0	1.000114
22400.0	274.03	-42.0	0.0	412.0	006.0	1.000114
22500.0	268.02	-43.0	0.0	405.0	006.0	1.000114

• At least one relative humidity value was used in the interpolation.

STATION ALTITUDE 41000 FEET MSL
1 OCT. 76 0815 HRS MDT
ASCENDANT NO. 27

UPPER AIR WIND
CONDITIONS / 4
MULTIPLIER

TABLE IX (CONT)

WIND COORDINATES
21/140.461
264.45.21 PCT N

GEOMETRIC ALTITUDE FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEPOLINT DEGREES CENTIGRAVE	REFRACTION PERCENT	WIND SPEED OF SURFACE METERS PER SEC	WIND DIA. DIKT CHT. DEGREES (DEG.) ANTS	WIND DIA. DIKT CHT. DEGREES (DEG.) ANTS	WIND DIA. DIKT CHT. DEGREES (DEG.) ANTS
34500.0	296.2	-45.0	-45.0	350.2	324.3	324.3	324.3
35000.0	295.4	-46.4	-46.4	356.6	324.2	324.2	324.2
35500.0	290.7	-47.9	-47.9	367.7	324.1	324.1	324.1
36000.0	244.9	-49.3	-49.3	381.1	324.3	324.3	324.3
36500.0	237.2	-50.6	-50.6	374.5	324.8	324.8	324.8
37000.0	232.7	-52.0	-52.0	381.1	324.0	324.0	324.0
37500.0	228.2	-53.3	-53.3	366.0	324.9	324.9	324.9
38000.0	222.9	-54.7	-54.7	361.7	327.4	327.4	327.4
38500.0	217.7	-56.0	-56.0	355.4	327.9	327.9	327.9
39000.0	212.7	-57.4	-57.4	349.3	327.4	327.4	327.4
39500.0	207.6	-57.7	-57.7	343.0	327.0	327.0	327.0
40000.0	202.7	-58.2	-58.2	335.6	327.9	327.9	327.9
40500.0	197.8	-58.7	-58.7	328.3	328.3	328.3	328.3
41000.0	193.2	-59.0	-59.0	321.4	329.0	329.0	329.0
41500.0	188.6	-59.7	-59.7	315.0	330.3	330.3	330.3
42000.0	184.1	-59.9	-59.9	308.2	331.3	331.3	331.3
42500.0	179.7	-60.1	-60.1	302.7	331.0	331.0	331.0
43000.0	175.5	-60.3	-60.3	296.4	332.2	332.2	332.2
43500.0	167.0	-60.7	-60.7	289.8	333.2	333.2	333.2
44000.0	165.2	-61.0	-61.0	284.3	334.4	334.4	334.4
44500.0	159.3	-61.6	-61.6	279.3	335.9	335.9	335.9
45000.0	171.3	-59.5	-59.5	339.0	349.4	349.4	349.4
45500.0	167.0	-60.7	-60.7	274.1	346.3	346.3	346.3
46000.0	165.2	-61.0	-61.0	269.1	346.0	346.0	346.0
46500.0	154.3	-61.6	-61.6	271.1	346.4	346.4	346.4
47000.0	155.4	-63.0	-63.0	269.5	346.4	346.4	346.4
47500.0	151.6	-64.5	-64.5	253.1	346.6	346.6	346.6
48000.0	147.0	-65.2	-65.2	247.9	346.1	346.1	346.1
48500.0	144.2	-66.1	-66.1	242.6	342.6	342.6	342.6
49000.0	140.6	-66.9	-66.9	237.0	342.1	342.1	342.1
49500.0	137.1	-67.7	-67.7	232.4	341.6	341.6	341.6
50000.0	133.7	-68.0	-68.0	227.0	341.9	341.9	341.9
50500.0	130.4	-67.9	-67.9	221.4	342.5	342.5	342.5

STATION ALTITUDE 41400.5 FEET MSL
7 OCT. 76 0815 HRS MDT
ASCENSION NO. 574

UPPER AIR DATA
261010Z/4
HOLLOMAN

TABLE IX (CONT)

STATION ALTITUDE FEET	PRESSURE MILLIBARS	TEMPERATURE DEGREES CENTIGRAVE	AIR WIND PERCENT MEIER	RELATIVE HUMIDITY PERCENT	RELATIVE HUMIDITY PERCENT	SPEED OF WIND KNOTS	WIND DIRECTION DEGREES	WIND DIRECTION DEGREES	INDIA OF REFLECTION
49000.0	127.2	-67.0	210.7	210.7	210.7	343.0	07.0	07.0	100000000
47500.0	121.0	-67.0	210.7	210.7	210.7	343.0	01.0	01.0	100000000
46000.0	120.9	-67.0	204.9	204.9	204.9	324.3	04.0	04.0	100000000
50500.0	117.9	-67.0	199.7	199.7	199.7	325.1	05.0	05.0	100000000
51000.0	115.0	-67.0	194.0	194.0	194.0	326.2	02.0	02.0	100000000
51500.0	112.1	-67.0	190.0	190.0	190.0	327.7	06.0	06.0	100000000
52000.0	109.3	-66.2	185.0	185.0	185.0	328.4	01.9	01.9	100000000
52500.0	106.6	-68.0	181.1	181.1	181.1	328.7	26.0	26.0	100000000
53000.0	104.0	-67.4	176.0	176.0	176.0	329.1	44.0	44.0	100000000
53500.0	101.4	-66.8	171.2	171.2	171.2	326.2	2.0	2.0	100000000
54000.0	98.9	-65.4	166.0	166.0	166.0	327.1	40.7	40.7	100000000
54500.0	96.5	-63.1	160.0	160.0	160.0	326.0	19.0	19.0	100000000
55000.0	94.1	-60.8	154.2	154.2	154.2	325.0	19.0	19.0	100000000
55500.0	91.7	-58.0	149.1	149.1	149.1	324.1	19.0	19.0	100000000
56000.0	89.7	-56.0	145.0	145.0	145.0	323.1	19.0	19.0	100000000
56500.0	87.5	-53.8	142.2	142.2	142.2	322.0	19.0	19.0	100000000
57000.0	85.4	-52.5	139.2	139.2	139.2	321.0	19.0	19.0	100000000
57500.0	83.4	-50.2	136.4	136.4	136.4	321.0	19.0	19.0	100000000
58000.0	81.3	-48.9	133.5	133.5	133.5	322.1	19.0	19.0	100000000
58500.0	79.4	-47.7	130.8	130.8	130.8	322.8	19.0	19.0	100000000
59000.0	77.5	-46.4	128.1	128.1	128.1	323.0	18.0	18.0	100000000
59500.0	75.6	-42.7	125.2	125.2	125.2	324.9	18.0	18.0	100000000
60000.0	73.8	-60.7	121.0	121.0	121.0	325.3	16.0	16.0	100000000
60500.0	72.0	-59.7	117.5	117.5	117.5	325.7	13.0	13.0	100000000
61000.0	70.3	-57.9	114.8	114.8	114.8	326.0	10.0	10.0	100000000
61500.0	68.6	-59.8	112.0	112.0	112.0	326.1	8.0	8.0	100000000
62000.0	67.0	-59.7	110.0	110.0	110.0	326.0	5.0	5.0	100000000
62500.0	65.4	-59.5	108.0	108.0	108.0	326.0	3.0	3.0	100000000
63000.0	63.8	-57.0	105.0	105.0	105.0	326.0	1.0	1.0	100000000
63500.0	62.3	-57.0	102.0	102.0	102.0	326.0	0.0	0.0	100000000

STATION ALTITUDE 41450' FLEET
7 OCT. 70 0815 HRS MDT
ASCENSION NO. 57

UPPER AIR ANALYSIS
281000Z/4
HULLMAN

TABLE IX (CONT.)

GEOMETRIC PRESSURE ALITUDE MSL FEET	TEMPERATURE AIR DEPULV MILLIBARS DEGREES CELIGRAVE	RELATION PERCENT	DENSITY CM/CUBIC MEIER KNOTS	SOUND SPEED KNOTS METERS (cm) SECONDS	WIND DIRECTION DEGREES (deg) WIND SPEED KNOTS METERS (m) PERIOD SECONDS	INFLUX UP PERCENT
64500.0	-27.3	322.4	98.4	274.4	322.1	1.000024
64500.0	-27.1	322.6	95.6	272.6	333.5	1.000024
65000.0	-26.9	322.8	93.4	272.6	333.9	1.000024
65000.0	-26.8	323.0	91.2	273.0	333.7	1.000024
65600.0	-26.6	323.2	89.0	273.2	333.9	1.000024
66000.0	-26.3	323.4	86.8	273.4	333.5	1.000024
66000.0	-26.0	323.6	84.7	273.6	333.9	1.000024
66600.0	-25.6	323.8	82.6	273.8	333.5	1.000024
67000.0	-25.3	324.0	80.5	274.0	333.9	1.000024
67000.0	-25.0	324.2	78.4	274.2	333.5	1.000024
67500.0	-24.7	324.4	76.3	274.4	333.9	1.000024
68000.0	-24.4	324.6	74.2	274.6	334.6	1.000024
68500.0	-24.1	324.8	72.1	274.8	334.2	1.000024
69000.0	-23.8	325.0	69.9	275.0	334.8	1.000024
69500.0	-23.5	325.2	67.8	275.2	335.4	1.000024
70000.0	-23.2	325.4	65.7	275.4	336.0	1.000024
70500.0	-22.9	325.6	63.6	275.6	336.6	1.000024
71000.0	-22.6	325.8	61.5	275.8	337.2	1.000024
71500.0	-22.3	326.0	59.4	276.0	337.8	1.000024
72000.0	-22.0	326.2	57.3	276.2	348.4	1.000024
72500.0	-21.7	326.4	55.2	276.4	348.0	1.000024
73000.0	-21.4	326.6	53.1	276.6	347.6	1.000024
73500.0	-21.1	326.8	51.0	276.8	347.2	1.000024
74000.0	-20.8	327.0	48.9	277.0	346.8	1.000024
74500.0	-20.5	327.2	46.8	277.2	346.4	1.000024
75000.0	-20.2	327.4	44.7	277.4	346.0	1.000024
75500.0	-20.0	327.6	42.6	277.6	345.6	1.000024
76000.0	-19.7	327.8	40.5	277.8	345.2	1.000024
76500.0	-19.4	328.0	38.4	278.0	344.8	1.000024
77000.0	-19.1	328.2	36.3	278.2	344.4	1.000024
77500.0	-18.8	328.4	34.2	278.4	344.0	1.000024
78000.0	-18.5	328.6	32.1	278.6	343.6	1.000024
78500.0	-18.2	328.8	30.0	278.8	343.2	1.000024
79000.0	-17.9	329.0	27.9	279.0	342.8	1.000024
79500.0	-17.6	329.2	25.8	279.2	342.4	1.000024
80000.0	-17.3	329.4	23.7	279.4	342.0	1.000024
80500.0	-17.0	329.6	21.6	279.6	341.6	1.000024
81000.0	-16.7	329.8	19.5	279.8	341.2	1.000024
81500.0	-16.4	330.0	17.4	280.0	340.8	1.000024
82000.0	-16.1	330.2	15.3	280.2	340.4	1.000024
82500.0	-15.8	330.4	13.2	280.4	340.0	1.000024
83000.0	-15.5	330.6	11.1	280.6	339.6	1.000024
83500.0	-15.2	330.8	9.0	280.8	339.2	1.000024
84000.0	-14.9	331.0	6.9	281.0	338.8	1.000024
84500.0	-14.6	331.2	4.8	281.2	338.4	1.000024
85000.0	-14.3	331.4	2.7	281.4	338.0	1.000024
85500.0	-14.0	331.6	0.6	281.6	337.6	1.000024

STATION ALTITUDE 4120.0 FEET M.D.T.
/ OCT. 10 0815 HRS MDT
ASCENSION NO. 2/4

UPPER AIR DATA
201000Z/4
HULLMAN

WEIGHT CIRCUMNATED
2717.59.24 FELT E
3067.95.21 FELT N

TABLE IX (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRAVE	RELATIVE HUMIDITY PERCENT	SUPER U. DEGREES CENTIGRAVE	WIND VELOCITY KNOTS	INFLUX OF CONTRACITION
77500.0	29.0	-51.0	40.0	26.0	148.6	5.7
77550.0	29.2	-51.1	40.7	26.0	145.0	4.4
80000.0	28.5	-51.0	44.0	26.0	116.9	3.1
82500.0	27.8	-50.9	43.0	26.0	116.0	1.9
85000.0	27.2	-50.6	42.0	26.1	75.7	0.6
87500.0	26.6	-50.3	41.0	26.1	60.4	1.0
90000.0	26.0	-50.2	40.0	26.1	50.0	1.0
92500.0	25.4	-50.2	39.0	26.0	39.0	1.0
95000.0	24.8	-50.0	38.0	26.0	30.9	1.0
97500.0	24.2	-49.9	37.0	26.1	30.0	1.0
100000.0	23.7	-49.7	36.0	26.1	34.5	1.0
102500.0	23.1	-49.6	36.0	26.0	34.0	1.0
105000.0	22.6	-49.4	35.0	26.0	33.2	1.0
107500.0	22.1	-49.3	34.0	26.1	33.0	1.0
110000.0	21.6	-49.1	33.0	26.1	34.0	1.0
112500.0	21.1	-49.0	32.0	26.0	34.7	1.0
115000.0	20.6	-48.9	32.0	26.0	34.7	1.0
117500.0	20.1	-48.8	31.0	26.0	34.7	1.0
120000.0	19.6	-48.6	31.0	26.0	34.7	1.0
122500.0	19.1	-48.5	30.0	26.0	34.7	1.0
125000.0	18.6	-48.4	30.0	26.0	34.7	1.0
127500.0	18.1	-48.3	30.0	26.0	34.7	1.0
130000.0	17.6	-48.2	30.0	26.0	34.7	1.0
132500.0	17.1	-48.1	29.0	26.1	33.7	0.9
135000.0	16.6	-48.0	29.0	26.1	34.2	0.9
137500.0	16.1	-47.9	28.0	26.2	34.2	0.9
140000.0	15.6	-47.8	28.0	26.2	34.9	0.8
142500.0	15.1	-47.7	28.0	26.2	34.3	0.8
145000.0	14.6	-47.6	27.0	26.3	34.5	0.8
147500.0	14.1	-47.5	27.0	26.3	34.9	0.7
150000.0	13.6	-47.4	26.0	26.3	35.0	0.7
152500.0	13.1	-47.3	26.0	26.3	34.7	0.7
155000.0	12.6	-47.2	25.0	26.4	34.6	0.6
157500.0	12.1	-47.1	25.0	26.4	34.6	0.6
160000.0	11.6	-47.0	25.0	26.4	34.6	0.6
162500.0	11.1	-46.9	25.0	26.4	34.6	0.6
165000.0	10.6	-46.8	25.0	26.4	34.6	0.6
167500.0	10.1	-46.7	25.0	26.4	34.6	0.6
170000.0	9.6	-46.6	25.0	26.4	34.6	0.6
172500.0	9.1	-46.5	25.0	26.4	34.6	0.6
175000.0	8.6	-46.4	25.0	26.4	34.6	0.6
177500.0	8.1	-46.3	25.0	26.4	34.6	0.6
180000.0	7.6	-46.2	25.0	26.4	34.6	0.6
182500.0	7.1	-46.1	25.0	26.4	34.6	0.6
185000.0	6.6	-46.0	25.0	26.4	34.6	0.6
187500.0	6.1	-45.9	25.0	26.4	34.6	0.6
190000.0	5.6	-45.8	25.0	26.4	34.6	0.6
192500.0	5.1	-45.7	25.0	26.4	34.6	0.6
195000.0	4.6	-45.6	25.0	26.4	34.6	0.6
197500.0	4.1	-45.5	25.0	26.4	34.6	0.6
200000.0	3.6	-45.4	25.0	26.4	34.6	0.6
202500.0	3.1	-45.3	25.0	26.4	34.6	0.6
205000.0	2.6	-45.2	25.0	26.4	34.6	0.6
207500.0	2.1	-45.1	25.0	26.4	34.6	0.6
210000.0	1.6	-45.0	25.0	26.4	34.6	0.6
212500.0	1.1	-44.9	25.0	26.4	34.6	0.6
215000.0	0.6	-44.8	25.0	26.4	34.6	0.6
217500.0	0.1	-44.7	25.0	26.4	34.6	0.6
220000.0	-0.4	-44.6	25.0	26.4	34.6	0.6
222500.0	-0.9	-44.5	25.0	26.4	34.6	0.6
225000.0	-1.4	-44.4	25.0	26.4	34.6	0.6
227500.0	-1.9	-44.3	25.0	26.4	34.6	0.6
230000.0	-2.4	-44.2	25.0	26.4	34.6	0.6
232500.0	-2.9	-44.1	25.0	26.4	34.6	0.6
235000.0	-3.4	-44.0	25.0	26.4	34.6	0.6
237500.0	-3.9	-43.9	25.0	26.4	34.6	0.6
240000.0	-4.4	-43.8	25.0	26.4	34.6	0.6
242500.0	-4.9	-43.7	25.0	26.4	34.6	0.6
245000.0	-5.4	-43.6	25.0	26.4	34.6	0.6
247500.0	-5.9	-43.5	25.0	26.4	34.6	0.6
250000.0	-6.4	-43.4	25.0	26.4	34.6	0.6
252500.0	-6.9	-43.3	25.0	26.4	34.6	0.6
255000.0	-7.4	-43.2	25.0	26.4	34.6	0.6
257500.0	-7.9	-43.1	25.0	26.4	34.6	0.6
260000.0	-8.4	-43.0	25.0	26.4	34.6	0.6
262500.0	-8.9	-42.9	25.0	26.4	34.6	0.6
265000.0	-9.4	-42.8	25.0	26.4	34.6	0.6
267500.0	-9.9	-42.7	25.0	26.4	34.6	0.6
270000.0	-10.4	-42.6	25.0	26.4	34.6	0.6
272500.0	-10.9	-42.5	25.0	26.4	34.6	0.6
275000.0	-11.4	-42.4	25.0	26.4	34.6	0.6
277500.0	-11.9	-42.3	25.0	26.4	34.6	0.6
280000.0	-12.4	-42.2	25.0	26.4	34.6	0.6
282500.0	-12.9	-42.1	25.0	26.4	34.6	0.6
285000.0	-13.4	-42.0	25.0	26.4	34.6	0.6
287500.0	-13.9	-41.9	25.0	26.4	34.6	0.6
290000.0	-14.4	-41.8	25.0	26.4	34.6	0.6
292500.0	-14.9	-41.7	25.0	26.4	34.6	0.6
295000.0	-15.4	-41.6	25.0	26.4	34.6	0.6
297500.0	-15.9	-41.5	25.0	26.4	34.6	0.6
300000.0	-16.4	-41.4	25.0	26.4	34.6	0.6
302500.0	-16.9	-41.3	25.0	26.4	34.6	0.6
305000.0	-17.4	-41.2	25.0	26.4	34.6	0.6
307500.0	-17.9	-41.1	25.0	26.4	34.6	0.6
310000.0	-18.4	-41.0	25.0	26.4	34.6	0.6
312500.0	-18.9	-40.9	25.0	26.4	34.6	0.6
315000.0	-19.4	-40.8	25.0	26.4	34.6	0.6
317500.0	-19.9	-40.7	25.0	26.4	34.6	0.6
320000.0	-20.4	-40.6	25.0	26.4	34.6	0.6
322500.0	-20.9	-40.5	25.0	26.4	34.6	0.6
325000.0	-21.4	-40.4	25.0	26.4	34.6	0.6
327500.0	-21.9	-40.3	25.0	26.4	34.6	0.6
330000.0	-22.4	-40.2	25.0	26.4	34.6	0.6
332500.0	-22.9	-40.1	25.0	26.4	34.6	0.6
335000.0	-23.4	-40.0	25.0	26.4	34.6	0.6
337500.0	-23.9	-39.9	25.0	26.4	34.6	0.6
340000.0	-24.4	-39.8	25.0	26.4	34.6	0.6
342500.0	-24.9	-39.7	25.0	26.4	34.6	0.6
345000.0	-25.4	-39.6	25.0	26.4	34.6	0.6
347500.0	-25.9	-39.5	25.0	26.4	34.6	0.6
350000.0	-26.4	-39.4	25.0	26.4	34.6	0.6
352500.0	-26.9	-39.3	25.0	26.4	34.6	0.6
355000.0	-27.4	-39.2	25.0	26.4	34.6	0.6
357500.0	-27.9	-39.1	25.0	26.4	34.6	0.6
360000.0	-28.4	-39.0	25.0	26.4	34.6	0.6
362500.0	-28.9	-38.9	25.0	26.4	34.6	0.6
365000.0	-29.4	-38.8	25.0	26.4	34.6	0.6
367500.0	-29.9	-38.7	25.0	26.4	34.6	0.6
370000.0	-30.4	-38.6	25.0	26.4	34.6	0.6
372500.0	-30.9	-38.5	25.0	26.4	34.6	0.6
375000.0	-31.4	-38.4	25.0	26.4	34.6	0.6
377500.0	-31.9	-38.3	25.0	26.4	34.6	0.6
380000.0	-32.4	-38.2	25.0	26.4	34.6	0.6
382500.0	-32.9	-38.1	25.0	26.4	34.6	0.6
385000.0	-33.4	-38.0	25.0	26.4	34.6	0.6
387500.0	-33.9	-37.9	25.0	26.4	34.6	0.6
390000.0	-34.4	-37.8	25.0	26.4	34.6	0.6
392500.0	-34.9	-37.7	25.0	26.4	34.6	0.6
395000.0	-35.4	-37.6	25.0	26.4	34.6	0.6
397500.0	-35.9	-37.5	25.0	26.4	34.6	0.6
400000.0	-36.4	-37.4	25.0	26.4	34.6	0.6
402500.0	-36.9	-37.3	25.0	26.4	34.6	0.6
405000.0	-37.4	-37.2	25.0	26.4	34.6	0.6
407500.0	-37.9	-37.1	25.0	26.4	34.6	0.6
410000.0	-38.4	-37.0	25.0	26.4	34.6	0.6
412500.0	-38.9	-36.9	25.0	26.4	34.6	0.6
415000.0	-39.4	-36.8	25.0	26.4	34.6	0.6
417500.0	-39.9	-36.7	25.0	26.4	34.6	0.6
420000.0	-40.4	-36.6	25.0	26.4	34.6	0.6
422500.0	-40.9	-36.5	25.0	26.4	34.6	0.6
425000.0	-41.4	-36.4	25.0	26.4	34.6	0.6
427500.0	-41.9	-36.3	25.0	26.4	34.6	0.6
430000.0	-42.4	-36.2	25.0	26.4	34.6	0.6
432500.0	-42.9	-36.1	25.0	26.4	34.6	0.6
435000.0	-43.4	-36.0	25.0	26.4	34.6	0.6
437500.0	-43.9	-35.9	25.0	26.4	34.6	0.6
440000.0	-44.4	-35.8	25.0	26.4	34.6	0.6
442500.0	-44.9	-35.7	25.0	26.4	34.6	0.6
445000.0	-45.4	-35.6	25.0	26.4	34.6	0.6
447500.0	-45.9	-35.5	25.0	26.4	34.6	0.6
450000.0	-46.4	-35.4	25.0	26.4	34.6	0.6
452500.0	-46.9	-35.3	25.0	26.4	34.6	0.6
455000.0	-47.4	-35.2	25.0	26.4	34.6	0.6
457500.0	-47.9	-35.1				

STATION ALTITUDE 41600 FEET
1 OCT. 70 0815 HRS MDT
ASCENSION ISL. 57°4

UPPER AIR DATA
CONDUCTED
BY THE 24 FLEET
ON 6/15/70.
TABLE IX (CONT)

GEOMETRIC ALTITUDE IN FEET	PRESSURE IN MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	RELATIVE HUMIDITY PERCENT	SPECIFIC GRAVITY METER KNOTS	WIND DIRECTION AND VELOCITY KILOMETERS PER HOUR	REFRACTION INDEX	REFRACTION INDEX
94600.0	12.0	-47.0	23.0	22.0	347.0	1.304	1.304
94500.0	11.6	-47.5	22.6	26.5	347.0	1.309	1.309
94400.0	11.3	-47.4	22.0	26.4	347.0	1.304	1.304
94300.0	11.0	-47.3	21.6	26.5	347.0	1.309	1.309
94200.0	10.6	-47.2	21.0	26.6	347.0	1.304	1.304
94100.0	10.3	-47.1	20.6	26.7	349.0	1.404	1.404
94000.0	10.0	-46.9	20.1	26.6	351.0	1.301	1.301
93900.0	9.7	-46.5	19.6	26.6	353.0	1.204	1.204
93800.0	12.5	-46.0	19.1	357.0	357.0	1.006	1.006
93700.0	12.2	-45.9	18.7	357.0	355.9	6.07	6.07
93600.0	11.9	-45.2	18.4	358.0	357.8	7.03	7.03
93500.0	11.6	-44.6	17.6	380.0	1.1	5.04	1.004
93400.0	11.4	-44.4	17.3	382.0	4.9	1.004	1.004
93300.0	11.1	-44.0	16.9	384.0	342.0	5.05	1.004
93200.0	10.7	-43.6	16.5	390.0	334.0	6.03	1.004
93100.0	10.6	-43.1	16.1	390.0	327.0	7.01	1.004
93000.0	10.4	-42.7	15.7	391.0	327.0	5.02	1.004
92900.0	10.2	-42.3	15.4	391.0	347.0	2.9	1.004
92800.0	9.9	-42.0	15.0	392.0	347.0	0.8	1.003
92700.0	9.7	-41.9	14.7	392.0	159.1	0.9	1.003
92600.0	9.5	-41.6	14.3	392.0	173.1	2.1	1.003
92500.0	9.3	-41.7	14.0	394.0	177.2	3.2	1.003
92400.0	9.1	-41.0	13.7	394.0	174.2	4.4	1.003
92300.0	0.9	-41.3	13.4	395.0	13.1	1.003	1.003
92200.0	0.7	-41.4	13.1	395.0	12.6	2.93.2	1.003
92100.0	0.5	-41.3	12.8	395.0	12.0	2.93.2	1.003
92000.0	0.3	-41.2	12.5	395.0	12.0	2.93.2	1.003
91900.0	0.1	-41.1	12.2	395.0	12.0	2.93.2	1.003
91800.0	0.0	-41.0	12.0	395.0	12.0	2.93.2	1.003

SATION ALTITUDE 14000 FEET MSL
7 OCT. 76 0815 HRS MDT
ASCENSION ISL. 274

HAWAIIAN ISLANDS
26 JULY 1974
HULOMAI

TABLE X

PRESSURE GRADIENT^a TEMPERATURE RELATIVE DENSITY PERCENT
ALTITUDE FEET DEGREES CENTIGRADE

ALTITUDE FEET	PRESSURE GRADIENT ^a	TEMPERATURE RELATIVE DEGREE C	DENSITY PERCENT	WIND DIRECTION DEGREES (18)	WIND VELOCITY KNOTS
3500.0	3.020*	8.0	-3.0	28.	4999.0
3000.0	6.520*	4.5	-3.0	20.	7997.0
2500.0	9.560*	1.0	-5.7	61.	9999.0
2000.0	10.177*	-2.1	-6.6	74.	346.8
1500.0	12.099*	-4.8	-9.2	71.	318.6
1000.0	14.152*	-8.6	-16.4	54.	315.5
500.0	16.370*	-8.2	-28.2	16.	305.4
500.0	18.776*	-13.0	-31.7	19.	311.9
1500.0	21.387*	-17.0	-35.1	20.	338.9
1000.0	24.251*	-22.0	-39.0	21.	328.6
350.0	27.406*	-30.9	-43.7	22.	323.8
300.0	30.550*	-37.0	-47.0	23.	325.7
250.0	34.797*	-46.1	-48.1	24.	324.1
200.0	39.693*	-58.5	-58.5	25.	322.7
175.0	42.476*	-58.4	-58.4	26.	329.3
150.0	45.605*	-64.9	-64.9	27.	325.6
125.0	49.415*	-67.7	-67.7	28.	325.3
100.0	52.623*	-66.5	-66.5	29.	327.6
80.0	56.181*	-61.4	-61.4	30.	322.5
70.0	60.901*	-59.9	-59.9	31.	346.1
60.0	64.077*	-57.4	-57.4	32.	333.1
50.0	67.871*	-56.0	-56.0	33.	330.6
40.0	72.489*	-57.3	-57.3	34.	103.2
30.0	78.572*	-51.3	-51.3	35.	129.3
25.0	82.470*	-50.1	-50.1	36.	134.5
20.0	87.269*	-48.6	-48.6	37.	327.1
15.0	93.491*	-47.0	-47.0	38.	347.1
10.0	102.365*	-42.0	-42.0	39.	327.6

* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE COMPUTATION.

** WIND DATA DUE TO MISSING RAW ALTIMETER AND ELEVATION ANALYSIS.

SITUATION ALTITUDE 4001.00 FEET
7 OCT. 76 0840 HRS MDT
ASCESSION, 1.00 • 303

SIGNIFICANT LEVELS OF
24100.000
JALAN

55TH SITE COORDINATES
4 40491.00 FEET E
4 4023.05 FEET N

TABLE XI

PRESSURE COEFFICIENT	DEPRESSION ALTITUDE MILLIBARS	DEPRESSION MILLIBARS	DEPRESSION FEET	DEPRESSION FEET	DEPRESSION FEET	DEPRESSION FEET	DEPRESSION FEET
0.950.5	4051.0	10.2	-1.5	-4.0	-4.0	-4.0	-4.0
0.500.0	5099.6	6.5	-5.8	-4.1	-4.1	-4.1	-4.1
0.111.0	6357.5	3.2	-7.0	-4.7	-4.7	-4.7	-4.7
0.797.2	6815.1	4.9	-7.7	-4.2	-4.2	-4.2	-4.2
0.768.8	7778.8	1.2	-6.6	-4.8	-4.8	-4.8	-4.8
0.726.4	9273.6	-0.6	-0.5	-5.5	-5.5	-5.5	-5.5
0.700.0	10241.8	-3.0	-0.4	-0.6	-0.6	-0.6	-0.6
0.656.4	111905.2	-6.7	-0.8	-3.9	-3.9	-3.9	-3.9
0.644.2	12385.9	-8.2	-0.3	-9.9	-9.9	-9.9	-9.9
0.636.0	12633.5	-7.2	-0.6	-9.0	-9.0	-9.0	-9.0
0.629.0	12997.5	-7.5	-1.1	-7.5	-7.5	-7.5	-7.5
0.615.3	13560.3	-8.6	-1.0	-7.0	-7.0	-7.0	-7.0
0.605.4	13973.6	-9.8	-1.0	-4.6	-4.6	-4.6	-4.6
0.597.3	14316.3	-9.4	-0.6	-4.7	-4.7	-4.7	-4.7
0.591.2	14577.0	-9.4	-0.7	-19.0	-19.0	-19.0	-19.0
0.570.4	15490.0	-7.5	-7.1	-19.0	-19.0	-19.0	-19.0
0.556.2	16135.8	-6.9	-5.5	-2.1	-2.1	-2.1	-2.1
0.500.0	16842.9	-11.7	-2.9	-2.2	-2.2	-2.2	-2.2
0.465.0	20659.7	-14.9	-0.5	-25.0	-25.0	-25.0	-25.0
0.435.0	22281.1	-16.1	-3.2	-23.0	-23.0	-23.0	-23.0
0.400.0	24366.7	-22.0	-7.4	-23.0	-23.0	-23.0	-23.0
0.370.8	25803.7	-25.9	-4.4	-24.0	-24.0	-24.0	-24.0
0.351.6	27443.5	-28.8	-1.9	-24.0	-24.0	-24.0	-24.0
0.320.4	29500.9	-34.0	-7.4	-24.0	-24.0	-24.0	-24.0
0.300.0	31112.0	-37.4	-36.4	-24.0	-24.0	-24.0	-24.0
0.290.2	31367.2	-39.1					
0.283.4	32401.5	-39.6					
0.250.0	35173.5	-48.0					
0.212.0	38679.5	-57.4					
0.200.2	39250.4	-57.0					

SATION NUMBER 4051.00 FLEET
7 OCT. 70 0840 HRS MDT
ASCOMSIGHT NO. 303

SIGNIFICANT LEVEL DATA
20100.0360
JALEN

TABLE XI (CONT)

PRESSURE millibars	GEOMETRIC ALTITUDE FSL FEET	TEMPERATURE AIR DEW POINT URGENT CLIMATE	HUMIDITY PERCENT
200.0	39069.2	-59.1	
191.1	40327.2	-60.1	
187.4	41231.4	-57.8	
172.6	42915.1	-58.3	
150.0	45003.1	-65.1	
138.4	47414.5	-66.5	
130.4	46612.7	-63.0	
122.0	49963.5	-63.2	
104.2	55128.9	-67.5	
100.0	53949.3	-66.0	
92.4	55527.6	-67.0	
87.7	56576.5	-63.5	
85.8	57026.8	-57.4	
74.3	59991.6	-62.6	
71.2	60866.4	-58.1	
70.0	61221.0	-59.1	
64.2	63010.3	-59.3	
58.6	64343.5	-55.5	
50.0	66237.7	-57.9	
42.2	71778.2	-56.9	
38.0	73986.2	-54.2	
35.6	75377.9	-51.4	
30.0	79058.4	-50.7	
20.0	87825.9	-49.1	
17.6	90358.0	-48.9	
15.4	90573.3	-45.9	
10.0	103074.2	-42.5	

SITE COORDINATES
4,0491.00 FEE E
4,4023.05 FEE N

STATION ALTITUDE 4051.00 FEET MSL
7 OCT. 76 0840 HRS MDT
ASCENSIO N 1.0. 303

UPPER AIR DATA
28100 JUN
JAL-CH

WSTM SITE COORDINATES
45°04'49.1" E 000°00'00.0" N
45°40'23.0" E 000°00'05.0" N

TABLE XII

STATION ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE DEGREES CENTIGRADE	AIR DENSITY PERCENT	REL.HUM. PERCENT	REFRACT.	SPEED KNOTS	DIRECTION DEGREES(TW)	WIND DATA REFRACT.
4051.0	1002.5	-1.5	44.0	103.7	059.5	20.6	20.6	1.000207
4500.0	969.0	-3.3	42.7	107.2	054.0	25.2	24.1	1.000202
5000.0	952.1	-5.4	41.3	105.5	052.5	29.2	28.1	1.000206
5500.0	937.4	-6.1	42.0	104.3	050.6	32.0	33.7	1.000202
6000.0	921.9	+0.1	45.3	103.6	049.0	36.6	34.7	1.000248
6500.0	906.7	-5.4	45.4	101.5	048.5	45.0	31.4	1.000244
7000.0	891.7	-5.5	43.9	99.4	048.5	53.0	28.1	1.000238
7500.0	776.9	-2.0	46.3	98.4	046.7	02.0	23.4	1.000255
8000.0	762.4	-9	-8.5	49.0	96.5	045.0	01.4	20.0
8500.0	749.0	-3	-9.5	51.4	95.0	044.6	32.0	16.4
9000.0	734.0	-3	-9.5	53.7	93.5	044.1	34.6	13.3
9500.0	720.1	-1.2	-8.4	57.6	92.0	043.0	16.0	11.3
10000.0	706.5	-2.4	-8.4	63.3	90.5	041.0	3.1	9.3
10500.0	693.0	-5.6	-3.0	71.1	89.0	040.2	32.5	9.7
11000.0	679.6	-4.7	-7.4	81.0	88.4	038.9	34.4	10.2
11500.0	666.8	-2.8	-7.0	91.0	86.7	037.6	36.6	13.1
12000.0	654.0	-7.0	-7.1	99.0	85.4	036.2	33.1	16.2
12500.0	641.3	-7.7	-8.4	94.9	84.0	035.3	35.4	19.7
13000.0	628.9	-7.5	-11.2	75.0	82.5	035.5	32.7	23.4
13500.0	616.8	-8.5	-12.9	70.5	81.7	034.2	32.5	27.7
14000.0	604.8	-8.8	-18.3	46.1	79.4	033.0	32.3	32.2
14500.0	593.0	-9.4	-24.8	27.3	78.8	632.9	32.6	1.000179
15000.0	581.5	-6.5	-27.9	19.0	76.2	533.9	32.1	44.2
15500.0	570.2	-7.5	-27.1	19.0	74.4	635.1	31.9	48.0
16000.0	559.2	-7.0	-25.0	40.6	73.6	635.7	31.8	51.2
16500.0	548.3	-7.5	-26.0	21.1	71.8	635.1	32.0	51.9
17000.0	537.6	-8.4	-26.6	21.3	70.1	634.0	32.3	50.9
17500.0	527.1	-9.3	-27.3	21.5	69.7	632.9	32.0	51.3
18000.0	516.9	-10.2	-27.9	21.7	68.5	621.9	32.6	53.5
18500.0	506.8	-11.1	-26.6	21.9	67.4	630.6	34.1	57.7

STATION ALTITUDE 4051.00 FEET MSL
 7 OCT. 76 0840 HRS MDT
 ASCENS. 1.0. 503

WEIGHT
 2610.000
 JAC-14

WSTM SITE COORDINATES
 44,0491.00 FEET E
 44023.05 FEET N

TABLE XII (CONT.)

GEOMETRIC ALTITUDE MSL FLEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	RELATIVE DENSITY PERCENT	SPECIFIC HEAT/CUPPER MM TEP	SOUND RATIO	INDEX OF REFRACTION.		INDEX DATA REFRACTIO.
						REFRACT. CORRECTION	REFRACT. CORRECTION	
19000.0	496.9	-14.0	22.3	064.5	029.7	345.0	61.1	1.000151
19500.0	487.0	-12.9	23.1	051.6	028.7	346.1	67.2	1.000148
20000.0	477.4	-13.7	23.0	040.9	027.6	346.4	74.4	1.000146
20500.0	468.0	-14.6	23.0	030.3	026.5	343.1	78.7	1.000143
21000.0	458.7	-15.4	24.6	019.1	025.9	339.8	82.4	1.000141
21500.0	449.5	-15.5	24.0	007.6	025.4	335.6	82.4	1.000138
22000.0	440.6	-15.9	23.5	059.4	025.0	331.0	82.2	1.000135
22500.0	431.7	-16.7	23.0	580.3	024.0	328.9	82.3	1.000133
23000.0	423.0	-16.1	23.0	571.7	022.2	327.2	81.9	1.000131
23500.0	414.4	-19.5	23.0	569.2	020.5	327.6	80.0	1.000129
24000.0	406.1	-21.0	23.0	560.8	018.7	326.6	78.4	1.000126
24500.0	397.8	-22.4	23.1	552.5	017.0	327.2	77.6	1.000124
25000.0	389.6	-23.7	23.4	544.0	015.3	327.6	76.4	1.000122
25500.0	381.6	-25.1	23.6	535.8	013.7	327.7	79.4	1.000120
26000.0	373.7	-29.2	24.0	527.2	012.2	327.8	82.2	1.000118
26500.0	365.9	-27.1	24.0	518.0	011.1	327.7	85.1	1.000116
27000.0	358.2	-28.0	24.0	509.0	010.0	327.4	87.6	1.000114
27500.0	350.7	-28.9	24.0	500.3	008.9	327.6	90.3	1.000112
28000.0	343.3	-30.1	24.1	492.4	007.3	326.7	92.7	1.000110
28500.0	336.0	-31.3	24.0	484.0	005.8	326.5	93.7	1.000108
29000.0	328.9	-32.5	24.0	476.1	004.3	326.6	95.3	1.000107
29500.0	321.9	-33.7	24.0	468.3	002.8	327.0	97.1	1.000105
30000.0	315.0	-34.9	24.0	460.5	001.4	327.5	98.3	1.000103
30500.0	308.2	-36.0	24.0	452.7	000.9	328.4	100.8	1.000101
31000.0	301.5	-37.1	24.0	445.0	000.5	329.3	102.7	1.000100
31500.0	294.9	-38.3	24.0	437.4	000.1	329.5	104.3	1.000098
32000.0	288.5	-39.3	24.0	429.7	000.6	329.7	105.7	1.000096
32500.0	282.1	-40.1	24.0	424.7	000.7	329.2	106.5	1.000094
33000.0	275.8	-41.6	24.0	414.9	002.9	328.5	107.1	1.000092
33500.0	269.7	-43.0	24.0	405.3	001.0	328.1	108.5	1.000091

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4051.00 FEET
7 OCT. 76 0840 HRS MDT
ASCENSION NO. 303

UPPER AIR DATA
20100-0630
JULIAN

TABLE XII (CONT.)

DEONTRIC ALITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE DEGREES CELSIUS	REL.HUM. PERCENT	LENSITI- SM/CUBIC METER	SPREAD OF SIGHTS KILOMETERS	DIRECTIONS DEGREES (TR.)	INDEX OF REFRACTION
34000.0	263.6	-44.5		40.7	389.1	327.4	1.0000089
34500.0	257.7	-40.0		395.3	367.1	327.7	1.0000088
35000.0	252.0	-47.5		389.0	385.2	327.7	1.0000087
35500.0	246.2	-48.9		382.4	363.4	328.6	1.0000085
36000.0	240.5	-50.2		375.8	381.7	328.5	1.0000084
36500.0	234.9	-51.6		369.3	579.9	329.1	1.0000082
37000.0	229.4	-52.9		362.9	378.2	329.6	1.0000081
37500.0	224.1	-54.2		356.6	576.4	330.3	1.0000079
38000.0	218.9	-55.6		350.5	574.0	330.6	1.0000078
38500.0	213.8	-56.9		344.4	572.9	330.7	1.0000077
39000.0	208.8	-57.5		337.2	572.1	330.6	1.0000075
39500.0	203.8	-58.2		330.2	571.2	331.0	1.0000074
40000.0	198.9	-59.2		323.9	569.6	331.9	1.0000072
40500.0	194.2	-59.8		317.0	569.1	333.0	1.0000071
41000.0	189.5	-59.1		309.4	569.9	334.5	1.0000070
41500.0	185.0	-57.9		297.4	571.6	335.6	1.0000067
42000.0	180.6	-55.0		294.4	571.4	336.8	1.0000065
42500.0	176.3	-53.2		285.7	571.2	337.6	1.0000064
43000.0	172.1	-50.5		275.3	570.6	338.9	1.0000063
43500.0	167.9	-59.7		274.0	569.2	340.9	1.0000061
44000.0	163.9	-60.9		269.9	567.6	344.7	1.0000060
44500.0	159.9	-62.0		266.8	566.1	347.4	1.0000059
45000.0	156.0	-63.2		259.9	564.5	349.0	1.0000058
45500.0	152.2	-64.4		254.0	562.9	345.9	1.0000057
46000.0	148.5	-65.3		249.9	561.7	341.0	1.0000056
46500.0	144.9	-65.7		245.3	561.1	344.5	1.0000054
47000.0	141.3	-66.1		237.8	560.5	329.6	1.0000053
47500.0	137.8	-66.3		234.0	560.4	325.9	1.0000052
48000.0	134.4	-64.8		224.8	562.3	324.7	1.0000050
48500.0	131.1	-65.3		217.7	564.3	325.1	1.0000048

STATION ALTITUDE 4051.00 FEET MSL
7 OCT. 76 0840 HRS MDT
ASCENS. IN. 363

UPPER AIR DATA
20106305
LEVEL,

SITE COORDINATES
49491.60 FEET E
44023.05 FEET N

TABLE XII (CONT.)

GEOPOTENTIAL ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE DEGREES CELSIUS	REL. HUM. PERCENT	WIND/CRUISE METER KNOTS	INCLINATION OF GROOSES (DEG.)	SPEECS KNOTS	INCL. ATA OF GROOSES (DEG.)	REFRACTIO. N OF RADIATION	INDEX OF REFRACTION
49000.0	127.9	-63.1			212.1	364.7	324.9	41.1	1.0000.7
49500.0	124.8	-63.1			207.0	364.6	324.2	40.2	1.0000.6
50000.0	121.3	-63.2			202.1	364.4	322.9	39.4	1.0000.5
50500.0	116.8	-63.9			197.8	363.5	320.1	38.7	1.0000.4
51000.0	115.9	-64.6			193.5	362.0	317.4	38.3	1.0000.3
51500.0	113.0	-65.3			189.4	361.7	317.0	39.1	1.0000.42
52000.0	110.2	-65.0			185.3	360.6	317.3	39.0	1.0000.41
52500.0	107.5	-60.6			181.4	359.8	320.6	40.1	1.0000.40
53000.0	104.9	-67.3			177.5	358.9	323.7	40.2	1.0000.40
53500.0	102.3	-66.8			173.7	359.6	327.2	40.2	1.0000.38
54000.0	99.7	-66.0			169.8	360.7	330.4	41.7	1.0000.37
54500.0	97.3	-66.3			165.9	360.2	333.5	42.7	1.0000.36
55000.0	94.9	-60.7			161.1	359.3	334.2	42.5	1.0000.36
55500.0	92.5	-67.0			157.3	359.4	334.7	42.2	1.0000.35
56000.0	90.3	-60.4			153.4	361.4	335.0	40.5	1.0000.34
56500.0	88.0	-63.8			149.5	363.7	334.7	36.3	1.0000.33
57000.0	85.9	-67.6			135.0	371.7	334.2	32.2	1.0000.31
57500.0	83.9	-66.2			131.9	371.1	334.1	27.7	1.0000.30
58000.0	81.8	-69.1			130.2	370.0	333.9	23.1	1.0000.30
58500.0	79.9	-69.0			130.5	368.8	333.7	19.3	1.0000.29
59000.0	78.0	-60.9			127.9	367.6	333.8	16.7	1.0000.28
59500.0	76.1	-61.7			123.4	366.4	333.9	14.0	1.0000.28
60000.0	74.3	-62.6			122.9	365.4	334.0	11.4	1.0000.27
60500.0	72.5	-60.0			119.5	368.8	334.1	8.4	1.0000.26
61000.0	70.7	-56.5			114.8	370.0	334.1	7.5	1.0000.26
61500.0	69.1	-59.1			112.4	369.9	334.0	6.5	1.0000.25
62000.0	67.4	-59.2			109.0	369.9	333.9	6.9	1.0000.24
62500.0	65.8	-59.2			107.2	369.6	333.9	6.5	1.0000.24
63000.0	64.2	-59.3			104.0	369.7	333.8	6.5	1.0000.23
63500.0	62.7	-59.3			101.7	371.1	333.8	6.7	1.0000.23

STATION ALTITUDE 4051.00 FEET MSL
 7 OCT. 70 0840 HRS MDT
 ASCENS. 1.00. 3.5

UPPER AIR DATA
 281000Z000
 JALEN

WSTN SITE COORDINATES
 450491.60 FEET E
 44023.05 FEET N

TABLE XII (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREE CENTIGRADE	REL.HUM. PERCENT	REL.HUM. CM/CURAC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TTN)	WIND SPEED KNOTS	INDEX OF REFRACTION
64000.0	61.2	-57.2	90.8	572.4	333.6	6.7	1.000022	
64500.0	59.8	-59.2	93.0	573.6	333.1	6.7	1.000021	
65000.0	53.4	-55.6	93.5	574.6	331.7	6.7	1.000021	
65500.0	57.0	-50.0	94.4	574.1	330.4	6.5	1.000020	
66000.0	55.6	-58.5	82.4	373.7	326.7	6.4	1.000020	
66500.0	54.3	-59.7	87.4	573.2	322.6	6.2	1.000019	
67000.0	53.0	-57.0	83.5	572.7	317.5	6.0	1.000019	
67500.0	51.8	-57.4	82.8	572.3	310.4	5.5	1.000019	
68000.0	50.6	-57.7	81.8	571.8	301.6	5.2	1.000018	
68500.0	49.4	-57.8	79.9	571.7	290.6	4.7	1.000018	
69000.0	48.2	-57.7	76.9	571.9	276.5	4.2	1.000017	
69500.0	47.1	-57.5	75.0	572.0	260.6	4.2	1.000017	
70000.0	46.0	-57.4	74.2	572.2	241.0	4.0	1.000017	
70500.0	44.9	-57.3	73.4	572.4	222.0	4.0	1.000016	
71000.0	43.8	-57.1	73.6	572.6	212.1	4.0	1.000016	
71500.0	42.8	-57.0	69.9	572.8	211.7	3.7	1.000015	
72000.0	41.8	-58.6	67.2	573.5	211.1	3.1	1.000015	
72500.0	40.8	-58.0	63.4	574.1	198.7	2.9	1.000015	
73000.0	39.8	-55.4	62.7	574.9	163.9	3.0	1.000014	
73500.0	38.9	-54.8	62.4	575.7	169.3	3.0	1.000014	
74000.0	38.0	-54.2	63.4	576.5	161.0	6.0	1.000013	
74500.0	37.1	-55.2	59.7	577.8	157.0	9.6	1.000013	
75000.0	36.2	-52.2	57.1	579.1	156.4	10.0	1.000013	
75500.0	35.4	-51.4	50.0	580.2	155.6	11.0	1.000012	
76000.0	34.6	-51.3	54.3	580.3	155.4	12.0	1.000012	
76500.0	33.8	-51.2	50.0	580.4	154.5	12.4	1.000012	
77000.0	33.0	-51.1	51.8	580.5	153.7	11.0	1.000012	
77500.0	32.3	-51.0	50.0	580.7	152.0	11.0	1.000011	
78000.0	31.5	-50.9	48.4	580.6	150.1	10.0	1.000011	
78500.0	30.8	-50.8	48.0	580.9	147.4	9.8	1.000011	

STATION ALTITUDE 4651.00 FEET MSL
 7 OCT. 1960 0840 HRS MDT
 ASCENS. OIL 1.0. 3.3

UPPLR Airc. Data
 28100-3500
 JNL-LIN

"SITE COORDINATES
 43°34'51.66 FLEET E
 4°40'23.65 FLEET N

TABLE XII (CONT)

GEOMETRIC ALTITUDE ASL FEET	PRESSURE ATM MILLIBARS	TEMPERATURE ATM DEGREES CENTIGRADE	REL.HUM. PERCENT	DIAPOINT DEGREES CENTIGRADE	SPEED OF WIND (TRUE) KNOTS	WIND DIRECTION DEGREES (TRI.)	SPEED KNOTS	INDEX OF REFRACTION
79000.0	30.1	-50.7	46.1	541.0	143.4	7.7	1.000010	
79500.0	29.4	-50.6	46.0	541.2	155.1	5.4	1.000010	
80000.0	28.7	-50.5	44.9	541.3	116.1	3.1	1.000010	
80500.0	26.1	-50.4	42.9	541.4	76.6	2.1	1.000010	
81000.0	27.4	-50.3	42.9	541.5	<7.0	2.1	1.000010	
81500.0	26.8	-50.3	44.9	541.6	1.0	3.9	1.000009	
82000.0	26.2	-50.2	45.9	541.7	252.5	4.6	1.000009	
82500.0	25.6	-50.1	45.0	541.9	347.9	4.4	1.000009	
83000.0	25.0	-50.0	39.0	542.0	343.1	4.4	1.000009	
83500.0	24.4	-49.9	35.1	542.1	340.8	3.9	1.000008	
84000.0	23.9	-49.8	37.2	542.2	340.1	3.2	1.000008	
84500.0	23.3	-49.7	36.4	542.3	339.0	2.5	1.000008	
85000.0	22.8	-49.6	35.5	542.5	342.7	2.7	1.000008	
85500.0	22.3	-49.5	34.7	542.0	348.6	2.5	1.000008	
86000.0	21.8	-49.4	35.9	542.7	353.6	2.7	1.000008	
86500.0	21.3	-49.3	36.1	542.8	355.0	3.7	1.000007	
87000.0	20.8	-49.3	32.3	542.9	355.0	5.2	1.000007	
87500.0	20.3	-49.2	34.6	543.1	355.6	6.7	1.000007	
88000.0	19.8	-49.1	36.8	543.2	354.6	7.6	1.000007	
88500.0	19.4	-49.0	35.1	543.2	354.4	8.2	1.000007	
89000.0	18.9	-49.0	29.4	543.3	354.1	6.4	1.000007	
89500.0	18.5	-49.0	26.6	543.3	353.6	9.3	1.000006	
90000.0	18.1	-48.9	26.1	543.4	354.0	9.1	1.000006	
90500.0	17.7	-48.8	21.5	543.5	354.2	8.7	1.000006	
91000.0	17.3	-48.6	26.8	543.6	354.7	8.3	1.000006	
91500.0	16.9	-48.3	26.2	544.1	355.1	6.0	1.000006	
92000.0	16.5	-48.1	25.6	544.4	355.6	7.7	1.000006	
92500.0	16.1	-48.0	26.5	544.5	356.3	7.4	1.000006	
93000.0	15.8	-47.9	25.0	544.7	356.5	7.2	1.000006	
93500.0	15.4	-47.4	24.4	545.0	356.9	6.8	1.000005	
			25.6	545.4	353.3	6.3	1.000005	

STATION ALTITUDE 4500.00 FEET MSL
7 OCT. 76 0840 HRS MDT
ASCENSION IS.

UPPER AIR DATA
28100.000
JALLOU

"SMA STATE COR. JALLOU
450491.60 FEE E
44023.05 FLEET N

TABLE XII (CONT)

GEODETIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEWEPOINT CENTIGRADE	RELATIVE HUMIDITY PERCENT	DENSITY GR/CUBIC METER	SPEED OF WIND, ATA KNOTS	DIRECTION WEATHER CONDITIONS	SPEED KNOTS	INDEX OF REFRACTION
94000.0	15.1	-47.1	2.2	515.7	•5	6•5	1.000005	
94500.0	14.7	-49.9	2.7	506.9	3.1	5•6	1.000005	
95000.0	14.4	-49.7	2.1	506.3	6.1	5•6	1.000005	
95500.0	14.1	-49.4	2.6	506.6	24•6	4•2	1.000005	
96000.0	13.8	-49.2	2.1	506.9	56•4	3•4	1.000005	
96500.0	13.4	-49.9	2.6	507.2	86•9	4•7	1.000005	
97000.0	13.1	-49.7	2.1	507.5	105•4	5•7	1.000004	
97500.0	12.9	-49.4	1.7	507.9	118•0	6•5	1.000004	
98000.0	12.6	-49.2	1.2	508.2	127•3	7•7	1.000004	
98500.0	12.3	-49.9	1.8	508.6	134•1	9•0	1.000004	
99000.0	12.0	-49.6	1.3	508.9	140•6	9•0	1.000004	
99500.0	11.7	-49.4	1.9	509.3	148•9	7•7	1.000004	
100000.0	11.5	-49.1	1.5	509.6	162•2	6•8	1.000004	
100500.0	11.2	-49.8	1.1	509.9	161•5	5•2	1.000004	
101000.0	11.0	-49.6	0.7	500.3			1.000004	
101500.0	10.7	-49.3	1.3	500.9			1.000004	
102000.0	10.5	-49.1	0.9	501.9			1.000004	
102500.0	10.3	-49.8	0.5	501.3			1.000003	
103000.0	10.0	-49.5	0.2	501.6			1.000003	

SATURN AT 1100Z 4051.00 FEET ASL
7 OCT. 76
ASCENSION ISL. 30.3

DATA LEVEL 2
261000Z0300
JALCN

STATION SATELLITE COORDINATES
45.0491.60 FEET E
45.4023.05 FEET N

TABLE XIII

MILLIBARS	FEET	FREQUENCY OF OCCURRENCE	AIR PRESSURE	TEMPERATURE	WIND DIRECTION	WIND VELOCITY	WIND DATA
600.0	5695.	6.5	-5.4	4.1	29.8	29.8	
600.0	6719.	3.2	-7.0	4.3	49.2	30.8	
6428.	•4	-8.2	5.1	53.8	17.4		
700.0	10235.	-7.8	-6.4	6.0	357.0	9.6	
800.0	12146.	-7.5	-7.0	9.9	330.8	17.3	
800.0	14159.	-9.2	-10.4	4.7	323.1	34.7	
800.0	16407.	-7.4	-25.2	2.1	320.2	51.0	
900.0	18022.	-11.7	-29.4	2.2	343.8	59.7	
400.0	21446.	-15.5	-31.4	24.	335.8	62.4	
400.0	24335.	-22.0	-37.4	3.3	327.1	77.8	
300.0	27569.	-20.1	-43.4	24.	327.0	90.5	
300.0	31062.	-37.4	-50.4	24.	329.4	103.1	
250.0	35107.	-40.0	-40.0	24.	327.8	103.7	
250.0	39065.	-59.1	-59.1	24.	331.7	101.7	
175.0	42557.	-58.2	-58.2	336.2	107.7		
150.0	45694.	-65.1	-65.1	343.5	47.7		
125.0	49344.	-63.1	-63.1	324.3	40.3		
100.0	53759.	-66.0	-66.0	330.1	41.6		
80.0	58302.	-59.0	-59.0	333.7	19.5		
70.0	61030.	-59.1	-59.1	334.1	7.1		
60.0	64206.	-56.4	-56.4	333.4	6.7		
50.0	68002.	-57.0	-57.0	297.4	5.0		
40.0	72634.	-55.5	-55.5	167.2	2.9		
30.0	78745.	-50.7	-50.7	142.9	7.5		
25.0	82649.	-50.0	-50.0	543.3	4.4		
20.0	87444.	-49.1	-49.1	354.9	7.4		
15.0	93657.	-47.1	-47.1	•9	6.2		
10.0	102553.	-42.5	-42.5				